

REMARKS

INTRODUCTION:

As set forth in the preceding section, claims 1, 6, 11, 16, 21, 26, 30 have been amended. No new matter has been added by way of the amendments. No claims have been added or cancelled herein.

Claims 1-37 are pending and under consideration. Claims 1, 6, 11, 16, 21, 26, 30, and 34 are independent claims. Reconsideration of the claims in view of the current amendments and the following remarks is respectfully requested.

ALLOWABLE SUBJECT MATTER:

Claims 2, 3, 7, 8, 19, 20, 22, 23, 27, 28 31, 32 and 37 are indicated as allowable if rewritten in independent form. Applicants will hold the rewriting of these claims in abeyance until the arguments presented herein have been considered.

REJECTIONS UNDER 35 USC § 103:

Claims 1, 4-6, 9-18, 21, 24-26, 29, 30, 33, 34, 36 and 37 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,772,114 to Sluijter et al. ("Sluijter") in view of U.S. Patent No. 6,947,886 to Rose et al. ("Rose"). All rejections are respectfully traversed.

Amended independent claim 1 recites at least the following:

bandwidth-extension-encoding the digital data, outputting bandwidth-limited data, and generating bandwidth extension information, wherein said bandwidth-extension-encoding includes receiving the digital data, slicing off a portion of the digital data in a high frequency band with the remaining portion of the digital being the bandwidth-limited data, and wherein the bandwidth extension information is information necessary for restoring the sliced portion of the digital data;

Applicants respectfully submit that the portions of Sluijter and Rose cited in the Office Action, taken alone or in combination, fail to suggest or disclose all of the above-recited features.

The Final Office Action asserts in the *Response to Arguments* section at page 2 that Sluijter illustrates the above-recited “bandwidth-extension-encoding” at FIGS. 1 and 2, where the Office Action asserts Sluijter illustrates “splitter 7 divid[ing] the digital data into a low-band and high-band data.”

Applicants respectfully disagree with the Final Office Action assertion and request reconsideration for at least the following reasons.

First, in the presently claimed embodiment, the band-extension information is multiplexed with the coded bandwidth-limited data without any coding process on the bandwidth-extension information, whereas in Sluijter, a coding process is performed on the high-frequency range signal (corresponding to the bandwidth-extension information indicated by the Examiner) by the second coder (HFENC) 11 and the coded high-frequency range signal is combined with the coded low-frequency range signal.

In addition, Applicants have amended claim 1 to clarify that the band-extension information does not include digital data (or audio data) in the high frequency band. Rather, the band-extension information in the presently claimed embodiment is used as information for restoring the sliced portion (i.e. the digital data (or audio data) in the high frequency band) of the digital data. In contrast with claim 1, in Sluijter, the output of HFENC (11) includes high frequency band data in the form of LPC coefficients.

Accordingly, Applicants assert that Sluijter fails to suggest or disclose all of the above-recited features. Furthermore, the Office fails to establish that Rose compensates for the noted deficiencies of Sluijter.

Amended independent claim 1 further recites at least the following:

encoding the bandwidth-limited data into a hierarchical structure
having a base layer and at least one enhancement layer so as to
control a bit rate; and

Applicants respectfully submit that the portions of Sluijter and Rose cited in the Office Action, taken alone or in combination, fail to suggest or disclose all of the above-recited features.

The Final Office Action notes at page 4 that Sluijter fails to specifically disclose “encoding the bandwidth-limited data into a hierarchical structure,” as recited in claim 1. However, the Office proposes to modify Sluijter based on Rose and asserts that Rose illustrates and describes the missing features at FIGS. 3 and 4 and col. 5, line 60 to col. 6, line 48.

Applicants respectfully disagree with the Office assertion that Rose compensates for the deficiencies of Sluijter and request reconsideration for at least the following reasons.

The Office asserts that Rose discloses encoding the bandwidth-limited data into a hierarchical structure having a base layer and at least one enhancement layer so as to control a bit rate (see page 4 of detailed Action). However, the cited portions (line 60 of col. 5 to line 48 of col. 6 referring to FIGS. 3-4) of Rose merely appear to describe coding the original signal x into a base layer and an enhancement layer. Consequently, the bandwidth-limited data in which high frequency data is sliced off is different from the original signal of Rose.

In view of all of the preceding assertions, Applicants respectfully submit that independent claim 1 patentably distinguishes over Sluijter and Rose, and should be allowable for at least the above-mentioned reasons. Since similar features recited by each of the independent claims 6, 21, and 26, with potentially differing scope and breadth, are not suggested or disclosed by Sluijter and Rose, the rejection should be withdrawn and claims 6, 21, and 26 also allowed. In addition, since similar features recited by each of independent claims 11, 16, 30, and 34, with scope directed to decoding rather than encoding, are not suggested or disclosed by the same, the rejections should be withdrawn and claims 11, 16, 30, and 34 should also be found allowable.

Further, Applicants respectfully submit that claims 4, 5, 9, 10, 12-15, 17, 18, 24, 25, 27-29, 33, 36 and 37, which variously depend from independent claims 1, 6, 11, 16, 21, 26, 30, and 34, should be allowable for at least the same reasons as claims 1, 6, 11, 16, 21, 26, 30, and 34, as well as for the additional features recited therein.

CONCLUSION:

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

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If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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